PB82-218090

Conference on General Aviation Airport Noise and Land Use Planning. Volume I: Panel Summaries
October 3-5, 1979

Georgia Inst. of Tech.
Atlanta

Prepared for

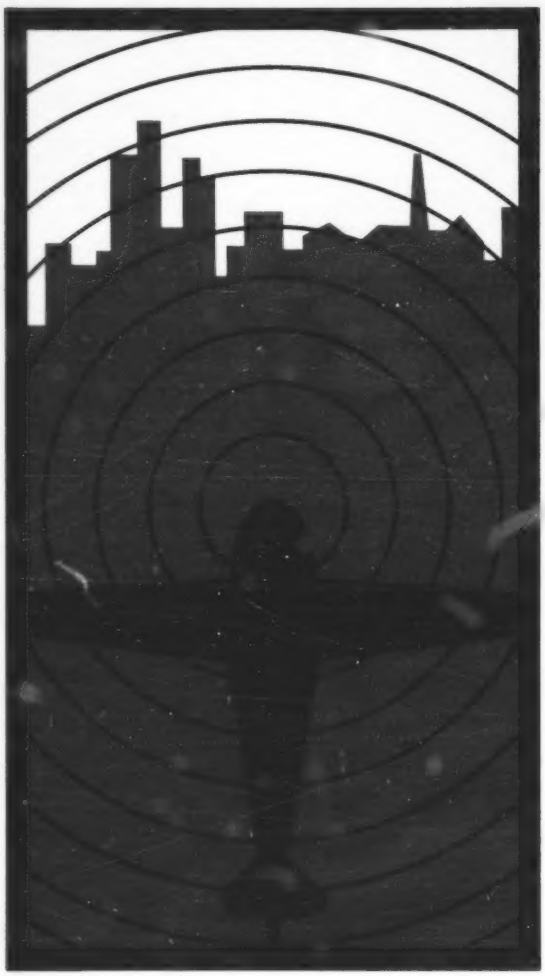
Environmental Protection Agency
Washington, DC

Feb 80

U.S. Department of Commerce
National Technical Information Service
NTIS

PB82-218090

Conference on General Aviation Airport Noise and Land Use Planning



Volume I Panel Summaries

October 3-5, 1979

Georgia Institute of Technology

Prepared Under Contract G8-01-5040
For Environmental Protection Agency,
Office of Noise Abatement and Control

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA 22161

TECHNICAL REPORT DATA
(Please read Instructions on the reverse before completing)

1. REPORT NO.	2.	3. RECIPIENT'S ACCESSION NO.
EPA 550/9-80-320_A		PB82 218090

4. TITLE AND SUBTITLE	5. REPORT DATE
Conference on General Aviation Airport Noise and Land Use Planning Vol. I Proceedings	Approved February 1980
	6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S)	8. PERFORMING ORGANIZATION REPORT NO.
Edited by Clifford R. Bragdon	
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT NO.
College of Architecture Georgia Institute of Technology Atlanta, GA 30332	11. CONTRACT/GRANT NO. EPA 68-01-5161
12. SPONSORING AGENCY NAME AND ADDRESS	13. TYPE OF REPORT AND PERIOD COVERED
Office of Noise Abatement and Control U.S. Environmental Protection Agency Washington, D.C. 20460	Final, 3-5 October 1979
	14. SPONSORING AGENCY CODE EPA/ONAC ANR-471

15. SUPPLEMENTARY NOTES

16. ABSTRACT

This report constitutes the proceedings of the three day conference on general aviation airport noise and land use planning. Included are advance copies of the speakers' presentations that were available at the conference, a summary of each of the five panels, a noise bibliography, and a transcription of all discussions including audience participation.

The conference was unique in the sense that a diverse group of individuals were invited to attend representing the wide range of constituents of general aviation. They were encouraged to participate by expressing their interests and views and to interact with each other. Because of the novel aspects of the conference and the fact that there is no comparable information available elsewhere, it was determined to reproduce all discussions as accurately as possible. It is anticipated that other conferences of this nature will be held and that this report will provide valuable background and reference information.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Aircraft Noise, Airport Noise, Aviation Noise, Avigation Easement, Community Response, FAR Part 36, General Aviation, Joint Use Airports, Land Use Planning, Noise Abatement Flight Procedures, Noise Compatible Land Use, Noise Impact, Zoning.		

18. DISTRIBUTION STATEMENT	19. SECURITY CLASS *(This Report)*	21. NO. OF PAGES
Release Unlimited	Unclassified	
	20. SECURITY CLASS *(This page)*	22. PRICE
	Unclassified	

EPA Form 2220-1 (9-73)

EPA 550/9-80-320 - A

CONFERENCE ON GENERAL AVIATION AIRPORT NOISE AND LAND USE PLANNING

VOLUME I PANEL SUMMARIES

3-5 October 1979

Georgia Institute of Technology

Atlanta, Georgia

Prepared For:

U.S. Environmental Protection Agency
Office of Noise Abatement and Control

Under Contract No. 68-01-5161

This report has been approved for general availability. The contents of this report reflect the views of the contractor, who is responsible for the facts and the accuracy of the data presented herein, and do not necessarily reflect the official views or policy of EPA. This report does not constitute a standard, specification, or regulation.

TABLE OF CONTENTS

	Page
FOREWORD	iii
INTRODUCTION	v
CONFERENCE SUMMARY AND RECOMMENDATIONS	vii
SUMMARY OF PANEL DISCUSSIONS	xiii
PANEL A: Impact of General Aviation Activity.	1
PANEL B: Prospectives on G.A. Planning.	5
PANEL C: Regulatory Responsibilities for G.A. Planning.	9
PANEL D: Private Sector Role in G.A. Activity	15
PANEL E: Non G.A. Planning Experience	21

FOREWORD

This volume, Volume I, of the report on the Conference on General Aviation Airport Noise and Land Use Planning at Georgia Institute of Technology, October 3, 4, and 5, 1979, includes summaries of panel discussions held at the conference.

Volume II includes the 12 prepared papers which were presented at the conference. Verbatim transcripts of the panel discussions are contained in Volume III together with a glossary of some of the terms used in the discussion.

The verbal presentations at the conference differed in content and format from these prepared papers and there was general discussion of each subject after the verbal presentation.

This volume is a set of summaries of the five panel discussions which took place on October 3, 4, and 5, 1979 at the Conference on General Aviation Airport Noise and Land Use Planning.

These summaries are intended to present the highlights of the presentations and discussions. These panels were relatively unstructured. In some the panelists made a presentation of their ideas on the subject being discussed before the general discussion. In others the panelists merely gave a summary of their experience before the discussion started.

The format of the summaries also varies. In each summary the words of the speaker were used to express his contribution, with some additional wording to document his thoughts as briefly as possible, but still convey his meaning. In some cases this was accomplished by using succinct phrases joined together in sentences each of which expressed a paragraph or more of conversational discussion. In other cases longer sections of the discussions are presented. Where the same point or experience is presented several times, that point or experience is presented once with the statement that it was supported by others.

These summaries are less than one-fifth as much reading material as the verbatim transcript which appears in Volume III. The summaries of the discussions of Panels A, B, and C were collected from various parts of the discussions and presented under subheadings. The summaries of Panels D and E are presented in the order given in the transcript in Volume III.

Preceding page blank

INTRODUCTION

The theme of this conference was General Aviation Airport Noise and Land Use Planning. General aviation (GA) and its network of airports represents the second largest transportation system in the United States, approximately 14,000 airports and 190,000 aircraft.

The purpose of this conference was to examine the development of general aviation airports in relationship to land use planning with four purposes in mind:

1. Identify the status of general aviation activity at present and in the future.

2. Assess the degree to which general aviation may be a noise source.

3. Outline the existing and proposed methods for minimizing general aviation noise.

4. Determine what methods or controls, if any, are necessary to improve the off-airport acoustical environment in the future.

This conference for the first time brought together representatives from a relatively complete group of constituencies or role players having important, though in some cases unidentified, influences in the aircraft noise land use control area. The speakers and panelists participating in the conference included:

13 representatives from noise regulatory authorities; 3 Federal, 5 State and 5 local

13 land use planners working on aircraft noise/land use compatibility; 2 Federal, 1 State, 3 local and 7 private professional planners

7 citizen organizations concerned with aircraft noise/land use compatibility; 2 national, 5 local

5 aircraft industry organizations; 4 national and 1 local

Preceding page blank

7 organizations representing those interested in land development near airports, including 4 involved in real estate transactions, 1 brokerage firm and 2 real estate appraisers.

The presentations and discussions were noteworthy for their openness and frankness and the general lack of propaganda or defensive positions. Participants were primarily interested in educating other participants as to the way the system works in their particular field. The result was an educational process highly beneficial to all parties involved.

Sponsored by the EPA, Office of Noise Abatement and Control, it was conducted by the Georgia Institute of Technology, College of Architecture, Department of City Planning, Atlanta, Georgia.

The conference attendees were encouraged to participate in a variety of ways. Five panels were conducted during the three-day conference. Each panel consisted of speakers addressing different topics as well as persons with particular interests in the topic area. These persons interacted with the speakers in a panel format. Audience participation was encouraged during each panel session.

These proceedings include advance copies of the speaker's presentation that were available at the conference, a summary of each of the five panels, a noise bibliography, and a transcription of the three-day conference. The transcript includes the speakers' presentations, the panelists' discussion and the audiences' questions and remarks. In some cases, the speakers' presentations differed significantly from their advance copies.

CONFERENCE SUMMARY AND RECOMMENDATIONS

SUMMARY

This conference on General Aviation Airport Planning and Noise Control brought together experts from several professions which have direct impact on these problems. Many of these experts were amazed to find the lack of understanding which exists among other professionals who also work on this problem.

As á result of this conference there appear to be several overall findings generated from the speaker presentations, panelists, and conference discussions.

1. Information Exchange - A strong interest exists in the sharing of airport planning information and experiences which up until now has been either unknown or inaccessible. Many of these participants found they had similar situations and the sharing of information provided the opportunity to begin solving their problems. Education is a basic means by which such an exchange can be achieved.

2. Levels and Descriptors of Noise - General aviation airports are diverse in nature; consequently, there is concern that the aircraft noise descriptors developed for air carrier airports may not be appropriate for general aviation airports. Collectively, general aviation involves a wide ranging number of aircraft types, operations and off-airport land uses. It appears therefore that the present noise descriptors and noise thresholds may not be appropriate in all circumstances.

3. Federal Involvement - The FAA has not consistently addressed the needs of general aviation airports and their planning. Commercial air carrier airports have been the central focus of FAA attention; consequently, changes are necessary to preserve the integrity of general aviation airports and the adjacent airport communities. The roles of all federal agencies in achieving this objective need to be evaluated, particularly, EPA and DOT-FAA.

4. Federal Control at Air Carrier Airports . The DOT/FAA aviation noise abatement Policy for air carrier airports was quoted at the conference. It states that the federal government has "the obligation to assure that airport proprietor actions to meet local needs do not conflict with national and international purposes".

5. Which Airports Will Have Noise Problems. It was pointed out that all airports have potential noise problems at some point in their expansion cycle. When the airport becomes an air carrier airport the airport operator cannot make the large reductions in traffic required to reduce noise impact on people living near the airport.

6. Airport Noise/Land Use Planning. Land use planning is not possible without information on current and predicted future noise exposure levels. However, most general aviation airports are not aware of the need for this information. When the noise impact becomes more severe the airport operator may not release this information for fear of aggravating this problem.

7. Assurances of Compatible Land Use Often Not Adequate. The assurances of compatible land use required by airport operators from communities near airports in planning programs financed by the Airport Development Aid Program (ADAP) may be nonexistent or ineffective. In some cases the planning grant program is terminated before the communities respond to the airport operator's request for assurances.

8. Private Sector Planning - The conference was most effective in identifying what the public sector is doing to address airport noise and land use. However, the private sector at least equally influences decisions relative to off-airport planning. These areas of activity need further detailing including determining mechanisms by which they may work more in concert with the overall objectives of the airport plan. Without their participation and cooperation, solutions to present land use problems will not be achieved, and the efforts of the private sector can be counterproductive.

9. Planning and Zoning Commissions Unreliable. Conferees pointed out that planning and zoning commissions concerns frequently do not extend beyond the next election. They cannot make commitments which the next commission cannot overturn. They are notoriously susceptible to pressures from developers who may profit handsomely from zoning changes or variances in their favor. They operate on a short turn basis.

10. Non-Regulatory Incentive - Certain aspects of regulation remain vital to protecting the public's interest. This protection involves the infrastructure including airport facilities as well as our housing stock. Most protection efforts have involved the regulatory process. Non-regulatory incentives need to be explored to address airport noise planning solutions in a comprehensive manner.

11. Indirect Impacts - The concern for aircraft noise and associated land use cannot be examined in a vacuum. There are other factors beyond noise abatement influencing the operation of airports. This conference identified some of these factors. For example, the relationship of energy conservation to noise control must be examined.

RECOMMENDATIONS

These overall summary remarks suggest several future courses of action. The following are basic recommendations that would provide constructive direction to the problem of airport planning with respect to noise.

1. Airport Land Use Clearinghouse - Currently there is no existing data base that summarizes in a descriptive manner effective ways to implement an airport plan at the local level. A comprehensive data base of land use-related planning techniques needs to be developed. The identification and cataloging of such techniques should be assembled and made available to all potential users. A clearinghouse for land use techniques would become a repository for state-of-the-art experiences.

The information would cover several planning areas as delineated below:

A. Land Use

1. Comprehensive plan
2. Zoning
3. Building code
4. Site design/plat review
5. Subdivision regulations
6. Truth in sales - real estate declarations
7. Other

B. Public Education

1. Citizen participation processes-public hearings
2. Other

C. Financial

1. Capital improvement programming
2. A-95 review
3. Taxation
4. Construction and mortgage financing
5. Market analysis
6. Appraising
7. Other

2. Centers of Aviation Planning - There is a need for technical assistance to governmental jurisdictions in airport planning with respect to noise. Currently such efforts at best are disjointed. Such centers could have several functions:

A. Prepare the clearinghouse information on land use planning (as previously described)

B. Develop and coordinate workshops and conferences on airport planning/noise themes

C. Prepare and disseminate instructional materials

D. Establish a cooperative internship/work study program for municipalities requesting services

E. Undertake applied studies/research as requested.

These centers should be associated with universities. It would be imperative that such universities have a potential outreach program with a recognized graduate urban planning curriculum including a transportation emphasis.

3. Airport Planning Conferences - There is a need to pursue this subject further using a conference format. Considerable benefit results from the meeting of role players involved in this area which cannot be obtained through a clearinghouse format. Such a conference to be successful in the future should be designed to accomplish specified objectives.

A. The following conference topics are suggested by the questions asked and the discussions at this conference. These conferences could consider both air carrier and general aviation airports, perhaps with the two groups at the same conference.

1. Basis for Airport Noise/Land Use Planning.

This would include a review of materials and guidelines developed by EPA, FFA, HUD and others together with sources for funding through various government programs.

2. Airport Noise/Land Use Planning for the Future.

This would include a review of predicted aircraft noise in the future and possible long range land use plans using various scenarios with discussions of the desirability and possibility of implementing selected scenarios.

3. Implementing Airport Noise/Land Use Plans.

This would involve studies of programs for educating the local residents and politicians regarding the need for planning and a review of programs which have been adopted and implemented.

4. Controlling Airport Noise and Land Use.

This conference could consider aircraft noise regulations, federal, state and local, and land use controls and funding for land use change, federal, state, and local. Such a conference could have as an objective the development of proposed legislation to improve the means for achieving airport noise/land use compatibility.

B. The following is a list of topics, some of which should be included in each of the proposed conferences.

1. Effectiveness of Land Use Planning Controls - Specific discussion and case study examples focusing on individual land use elements.

2. General-Aviation Airport Impact - An objective evaluation of the scale of the problem in terms of aircraft types, airports and land use impact.

3. Noise Descriptors - Relevance of present descriptors to adequately assess general aviation airports and off-airport impact.

4. Regulatory Process - Examination of the present Federal regulatory process as a means to minimize the problem of general aviation noise.

5. Public Participatory Process - The role of communities, neighborhoods and the general public in working to resolve airport noise related problems through the planning process. Included would be a discussion of various formal and informal structures presently in use.

6. Educational Media Programs - An evaluation of effective ways to communicate technical information to non-technical audiences in this subject area using case example.

7. Guidelines for Establishing Effective Airport Noise and Land Use Planning Program - Identify the universal components of an effective plan for abating noise through the land use planning process. Develop this into a model type set of guidelines for use by different types of communities.

8. Airport Noise Impacts - Identify these impacts in terms of general health parameters covering physical, emotional and social well-being effects on a quantitative basis.

9. Cost-Benefit Analysis - Develop a method by which all costs and benefits of general aviation are examined.

10. Effectiveness of Non-Regulatory Controls - The use of public and private sector incentives to minimize airport and land use impact.

4. Continuing Education - Based upon the general resolution of some of the themes, identified through the conference process, a continuing education/short course program should be developed. Such an effort should be aimed at getting essential materials into the hands of local governmental agencies responsible for aviation planning. Supportive educational materials need to be developed and disseminated concurrently with these continuing education programs. Various formats for offering these programs need to be considered.

SUMMARY OF PANEL DISCUSSIONS

Aviation Conference
General Aviation Airport Noise and
Land Use Planning

October 3-5, 1979

Participants at a recent EPA-sponsored conference concluded that concerted action from all affected interests is now necessary to curtail and prevent present and future noise problems around general aviation airports.

"General aviation" is a term for the some 14,000 smaller airports in the U.S. which handle generally smaller aircraft. It is projected that these small airports will see significant increases in operation during the next 20 years.

Participants at the conference included airport operators aircraft manufacturers, airlines, state and local officials, and representatives from the real estate and banking professions, national and local environmental groups, the Federal Aviation Administration, and EPA.

Land use planning was a major issue at the conference because of past belief that such planning could be the major part of local solutions to aviation noise problems.

But, as the conference brought out, restricting land uses for noise compatibility has proven to be an elusive goal. It is, of course, an impossible task if airport surroundings are already developed in an incompatible manner.

Participants cited the Dallas/Ft. Worth airport as an example of past and present inability to control the land use around commercial airports and, thus, prevent the introduction or expansion of these noise problems. This large airport, built a decade ago in an open area, is now beginning to suffer encroachment by residential neighborhoods.

Conference participants were told of instances where the lack of coordination between affected parties over airport land-use planning issues had led to independent decisions being made by local government officials,

Preceding page blank

land developers, and financial institutions without regard for long-range impact.

"There have not been an insufficient number of inappropriate, uneducated political and corrupt decisions and deals made regarding aviation noise abatement and land use, in particular," according to Shirley Gridle of Newport Beach, California.

On the other hand, in theory, and in many cases in reality, the local governements had no basis for planning to avoid residential development in areas which had or would have high aircraft noise exposure because of the care taken by airport operators not to divulge information on existing or predicted future noise exposure levels.

This unfortunate reality should serve as a painful reminder, EPA official noted, that only through a cooperative, non-adversarial effort on the part of everyone involved, can we even begin to get a handle on finding an equitable and viable solution to deal with this pervasive and threatening situation.

Participants were told that a serious weakness in the system is the fact that zoning commissions cannot control zoning beyond their term of office. Long range planning, to them, may be doing what is necessary to get reelected. Looking ahead 20 years, 10 years or even 5 years may be impossible.

Several states are implementing aircraft noise land use planning programs. But, there too, the final decision on zoning is left to the local governments and that is a stumbling block. A solution must be found for this problem.

In addition to the development of a foolproof means for controlling land development around airports in the future the EPA is committed to developing relief for residents who have experienced increases in aircraft noise exposure beyond acceptable levels.

According to Charles Elkins, Deputy Assistant Administrator in charge of EPA's National Noise Control Program: "It is going to take a coming to grips with the problem on the part of the aviation industry that they have to pay all the costs of their industry. Those who fly should not expect the costs to come from those who own land. In the long run that would be foolhardy because airport neighbors are going to put on more pressure, they are going to have lawsuits, they are going to stick with it."

According to Elkins, when people talk about aviation noise, they usually think first about abating the source of the noise. Yet, aircraft will never be silent, no matter how advanced the technology. "There will remain a residual noise impact, which must be attacked by the other actors in the airport game" he said.

Elkins identified these other actors as:

- Airport Operators responsible for the day-to-day operations at their airports. They are financially liable for any damages which result, including noise damage;

- Aircraft Operators responsible for the proper control of their airplanes, flying them safely in a manner least intrusive to airport neighbors; and, finally,

- State and local governments responsible for land-use control and zoning, and for public education and awareness of the airport noise conditions.

Elkins recounted steps that have already been taken by the aircraft industry to produce quieter aircraft. For instance, he said, it is no longer possible to talk about "quiet" propeller aircraft and "noisy" jets. "Some of our new jet aircraft today are quieter than propeller aircraft, and hopefully, quieter operation is the trend of the future for both types of aircraft."

NASA is conducting research with assistance from EPA and FAA to develop quieter propeller and jet powered general aviation aircraft. "We are hopeful that some technological advances, if only small ones, will result," Elkins said.

However, he noted, "There is no automatic link up between technological improvements in the laboratory and the incorporation of such improvements in the laboratory and the incorporation of such improvements in the aircraft of the future. One of the very difficult policy questions for any person in a Federal regulatory agency such as EPA or FAA is the extent to which the manufacturers can be expected to aggressively move ahead to incorporate new technology and to develop new technology of their own instead of waiting to be forced to do so through some type of government regulation."

Yet, as important as quieter aircraft are, conference participants were told that such quieting in and of itself is insufficient to solve the commercial aircraft noise problem and may well prove to be so in the general aviation area as well.

PANEL A: IMPACT OF GENERAL AVIATION ACTIVITY

The panel considered both aircraft noise control and the development of compatible land use with most of the discussion focused on land use planning and implementation. There were expressions of serious concern regarding lack of cooperation at both the Federal and local levels in the development and enforcement of noise abatement programs. There were also strong objections to the handling of land use compatibility plans in the past at both the Federal and local levels with the politicians getting most of the blame.

The following summary is taken from a verbatim transcript of this discussion, but with the material organized under specific headings.

Aircraft Noise Control

The discussion in this area dealt primarily with flight operations. The feeling of lack of interest by the FAA and airports in providing assistance in developing noise abatement procedures was expressed by Mr. Lewis in his comment that "... if they (the FAA Regional Offices) know you have not done your homework they will walk all over you."

With regard to plan implementation Ms. Searle stated, "... we have gone through this with them (the FAA) and they will not enforce, ... we don't get the cooperation we want."

In the discussion that followed regarding enforcement of rules which the FAA controllers agree to, Mr. Lewis quoted a controller as saying we give the violators "a slap on the wrist with a wet ruler." However, Mr. Wesler stated that "in many cases" the local regulations are enforced.

Mr. Critchfield stated that the air traffic controller is, "... the point man. If we cannot have his cooperation and assistance ... then (a program) is practically useless ... and it degenerates into a game ... and you can waste a lot of time and resources and efforts in playing ... a game."

Noise vs. Cost of Noise Abatement Flight Operations

This discussion illicited the following comments. Mr. Wesler stated that the rising cost of fuel helps the noise abatement program. "... the newer aircraft are more fuel efficient and quiet ...." Mr. Green stated that GAMA has "... received permission from FAA to establish a limitation ... to ... maximum normal operating power .... Those that meet the requirements will be from 4 to 9 dB less in noise than they are right now."

Land Use Planning

The keynote in this area was sounded by Ms. Grindle who said of the Chairman of the Board of Supervisors "... why did you recently approve a 500-unit development 100 feet from the end of the airport runway ... the real answer is that ... probably ... undoubtedly ... the person who owned that

property was a major campaign contributor to get him reelected." Ms. Grindle continued, "We have the planning ability and we have the technical knowledge to not have any of this happen, but we do not have politicians in this country who have the integrity and the long-range vision to make decisions that protect the long-range future, because the long-range future to a politician is his next election ...." Ms. Grindle also expressed the frustration of the panel in saying, "I wish I could learn what would motiviate the officials to provide sensible land use plans for airports. It is critical and it may be that it will take some serious impact like they have had in Los Angeles and Westchester County ... to bring those officials to the point where there is a real problem ...."

Mr. Swing stated that very few states require planning at all, let alone noise planning. "... planning has been mostly ineffective ... however, the noise problem is being recognized." He also expressed frustration due to the fact that, "... wherever you can build a house ... someone is going to try to do it. So we can fight the ... battles over and over and over and will probably lose."

Mr. Wesler commented, "It is difficult to get people to look ten years into the future and predict ... things ... particularly politicians."

Aviation Easements

Aviation easements were found to be destructive to land use planning. Mr. Swing described these as a major loophole in our standards. He pointed out that after purchasing easements the airport can consider that it has a right to make unlimited noise. He stated that at Oakland, "... they are ... developing condos and single family residences there because (they) have an easement and it is now considered noise compatible land use." He suggested that "... when ... ADAP funds are given out ... the conditions of an aircraft noise easement need to be expanded and ... some conditions be placed on them.

Mr. Wesler said "... those people who sold that easement must be awfully naive. He also stated that he would look into the Oakland situation.

Mr. Swing raised the question of how to get people to understand what they are doing when they waive their rights. He stated that "one of my pet peeves is aviation easements ...."

Ms. Gringle stated "... I am fully opposed to aviation easements of any sort. They do not solve the problem; they merely call it something else."

Mr. Tyler recommended that land use planning should be done at airports where there is vacant land and predicted or potential growth. Planning is now done only at airports which already have serious land use problems. Why not include airports where planning can be done in advance?

Mr. Wesler pointed out that even advance land use planning is not permanent. The plan can always be changed by the politicians.

65 Ldn for G.A. Airports Questioned

Mr. Swing introduced the question of the appropriateness of the 65 Ldn limit or the Ldn descriptor for G.A. airports with low background noise levels surrounded by affluent residential areas where people are well informed about law and politics and where there is concern about peace and quiet. Dr. Bragdon asked the same question.

Mr. Galloway stated that this area needs to be explored.

Mr. Schettino stated that EPA is exploring this area.

Implementation of Plans

Mr. Goodfriend and several others asked, "How do we implement land use plans when planners are only advisors to municipalities, banks, mortgage agencies, courts, etc.?"

Mr. Doyle pointed out that a plan should become an ordinance. Zoning must track the plan. The trick is to get a good plan approved. He said that too often the plan is converted to existing zoning because that is where the property and political interests lie. He stated that planning should be done by a metropolitan authority established by the legislature with power to veto local planning which is at variance with the metropolitan plan. The Minneapolis Council and the Atlanta Commission were cited as examples. San Francisco with its nine jurisdictions which will not face up to their responsibilities was cited as an example of how not to do planning.

Mr. Doyle mentioned, "Implementation of plan ... moving houses from 75 L_{db} areas -- some areas accept (these plans), others balk. Boston balked."

Dr. Bragdon reitterated that the plan must be a legislation document - California is a good example.

Ms. Grindle responded, "three votes can change it. We do this all the time."

Dr. Bragdon followed with the statement, "if the planning process is continuous, citizen groups must be on the job continuously - to keep this plan on track."

Mr. Tyler stated, "I believe that communities around airports should get together and work on their Congressmen to make this sort of thing (the development of compatible land use around airports) mandatory rather than voluntary on the part of the airport."

Mr. Elkins commented, "It is going to take a coming to grips with the problem on the part of the aviation industry ... that they have to pay all the costs of their industry. Those who fly ... should not expect ... (the costs) to come (from) those who own land (near airports, on the basis) that we think airports are a general good. ... in the long run (that is) foolhardy because (the airport neighbors) are going to put (on) all the pressure, they are going to have lawsuits, they are going to stick with it."

PANEL B: PERSPECTIVES ON G.A. PLANNING

The panel considered both technical and political aspects of airport noise/land use planning. There seemed to be a consensus that land use planning, while needing some additional improvements, is technically achievable to meet almost any reasonable specified goals. However, the prevention or obstructions to land use planning and the interferences or disruptions to the implementation of plans by local politicians seems to be so prevalent and so disastrous as to make the whole airport noise/land use planning effort seem quite futile. The panel seemed to agree that long-range planning for aircraft noise compatible land use around small but growing airports is not possible. The only possibility seems to be for the land around the airport to be developed for residential use, the airport to grow and make the residential area noncompatible with the airport, and then consider land use change.

Political Interference With Land Use Planning

Ms. Grindle reported on political interference with land use planning in Orange County, California. She stated that, "... all the planning in the world is not going to make a bit of difference when you have ... politicians who make political decisions. ... We have had 45 political officials indicted and convicted in Orange County in the last four years. ... The heart of the problem was ... the influence of campaign contributions on the elected officials and the decisions they made. ... We are talking about campaigns that were running in the order of $300,000 to $400,000 for a $35,000 a year job."

Ms. Grindle stated that she resigned from the planning commission to head up a commission to clean up politics. This commission obtained a law ... "that if an elected supervisor accepts more than a $1000 campaign contribution within a 48-month period ... from an applicant or his representative (for a zoning variance) ... he is disqualified from voting on that applicant's project." The law would also limit the campaign contributions of lobbyists to a total of $500 per year.

Ms. Grindle stated that the law has been in effect for seven months and is being monitored. "Time will tell," whether this approach works. If it doesn't, Ms. Grindle's group has other plans to implement.

The after dinner speaker, on October 4, 1979, Congressman J. Ambro, N.Y., outlined a situation in his town before he became supervisor which sounded quite similar to that described by Ms. Grindle. Unfortunately no record was made of Congressman Ambro's presentation.

Throughout the panel session comments were made supporting the seriousness and prevalence of the situation described by Ms. Grindle and Congressman Ambro.

Long-Range Airport Noise/Land Use Compatibility Planning

Mr. Tyler pointed out many general aviation airports which are small now "... are expected to increase their capacity by two times, four times, or ten times capacity between now and the year 2000. ... if the airports ... draw

Preceding page blank

contours which they believe will be the ultimate contours for that airport, as far as they can see in the future, and this means that the 65 Ldn (contour) would then expand to include a lot of area beyond their present boundaries, an area which at the present time could be properly zoned or perhaps air easements could be obtained to insure that ... (the land is) not used for purposes which would be incompatible with that future projected aircraft operation. ... how would the panel members react to the airport having written into the title of the property ... that it (the airport) will never produce noise ... beyond this specified 65 Ldn contour?"

The following comments were presented.

Mr. Eschweiler: "... they (the airports) would say, yes, we will sign it, but of course, we cannot commit a future legislature or further elected body. ... it is obviously something that delights a planner's heart, but ... I am not sure that you could guarantee a commitment over that kind of time because you are talking about committing land uses to 35 years into the future. You are beginning to talk in terms of renovating land uses at the end of that time span, usually, and renewal."

Mr. Clark: "Our biggest problem was ... one, the public nor ... the city council or airport commissioners believed we would ever produce that kind of noise .... And we are dealing with an area primarily undeveloped, about 95% rural land ... but rapidly becoming important because utilities are going to be put in there.

"... the three tools (which) ... I think will work ... are capital improvement ... purchase of easements ... (and) fair disclosure ... of the type of problem we can see coming ....

"... a number of communities are very conservative, rural property rights advocates, they (land use controls) just do not work and they are not a long-term solution. If you can afford to buy it, put an easement in and run in the utilities. Where I have dealt, that has been the most successful. ... normally ... (avigation easements) do not specify your noise level and I think you will have a hard time doing that. ... What is the penalty to the airport operation (which) will help enforce that (program)?"

Mr. Critchfield: "... most airport proprietors, their board of directors, are political persons. The most astute political persons ... will not commit themselves beyond the foreseeable term of their offices. So ... the idea of having a commitment ... that you will not ... make any more noise ... is nice. I really don't think it falls under the heading of practical solutions."

Comments to the contrary were received from Ms. Caldwell.

Ms. Caldwell: "Our ambient (in Greenwich, CT) is 55 Ldn. ... We wanted (agreement from Westchester County airport) that as the bottom level. What we have wound up with is 60 Ldn."

General Discussion of Land Use Planning

Noise exposure limits to be used in land use planning.

Mr. Robert Miller stated, "... there has been a lot of discussion about the value of Ldn's as a descriptor around small airports and its applicability to situations where there are a few ... loud jet operations. ... We saw that about three to five noisy jet operations per day are equivalent in level to something on the order of 300,000 operations per year by a quiet aircraft. ... That is an indication of the extent to which Ldn will ... highlight those (noisy operations) as being an important factor in the noise environment. ... So I think I would like not to have a metric instead of Ldn...."

Mr. Borthwick was pleased to see this group communicating in the area of land use planning. He said, however, "I see missing the presentation of planning tools." He referred to the FAA Handbook for Developing Noise Exposure Contours for General Aviation Airports and said, "... it is fairly simple to apply." He added, "But in terms of planning, I think the general models often suffice and we do not plan because the models we are told to use are too complicated; we do not understand them."

He also said, "... oftentimes there is an interstate (highway) next to the airport that is probably generating just as much noise ... as the airport and nothing is either done or mentioned about the highway. So I would encourage you in your planning process to consider all of the major noise sources, both surface and air transportation."

Mr. Galloway: "The new HUD regulations require that you look at all sources present, not at airport or highway or something else."

Mr. Eschweiler: "As to what would we do different in our next plan ... we would push to see that the lead agency ... was not an engineering department. The attitude of our engineers ... the public is the enemy ... you are giving up too much if you even begin to cooperate with them.

"Secondly ... you had better have microphones and tape recorders out there because the public is going to be looking for them.

"Thirdly, if I had my choice of the two agencies for public participation support, I would turn to EPA rather than FAA. EPA administered a program for us on water quality planning and it required a public participation input in there which makes the FAA program simply look sick."

Mr. Galloway: "There is a lot of hope engendered that small aircraft noise levels will come down. They probably will come down somewhat but ... attrition of prop aircraft is not over four or five percent a year. ... You are going to see the levels you have got now ... for a very long time."

Mr. Jansen: "... someone ... said that the HUD noise standard is 65 Ldn. ... At the regional administrator's discretion HUD will issue a mortgage insurance for noise levels as high as 75 dB (Ldn)." Then he added, "... one of the ways that they (the local planning agencies) can keep HUD out is to keep water and sewer out."

Mr. Delino: "How do people feel about allowing the individual community to determine what is an invasive or impinging noise level?"

Mr. Galloway: "Hopefully, in the very near future there will be issued an American national standard on land use and compatibility with noise. I think we are on the seventh revision. ... the recommendation is, it is the local community's responsibility to decide where it wants to be."

Mr. Jackson: "... as people are becoming more and more aware through various programs which are promulgated basically by EPA in terms of information on noise ... the more people have become aware that they can complain ... and that these things are damaging to their health ... the more they are starting to complain about it."

Why Do Some Pilots Make Unnecessary Noise?

The discussion was among Messrs. Lewis, Critchfield, Campenalla, and Green.

Mr. Lewis: "I know from the activities at Kennedy Airport there are some pilots ... I am talking about commercial pilots ... who I question how they are keeping their license."

Mr. Critchfield: "We appeal to the pilots, in executing noise abatement procedures, to their sense of professionalism."

Mr. Campanella: "... is there a strategy that we can use to influence the pilot ... (the) small percentage of pilots that really are trying to fly loud? ... Can we use peer pressure through your pilot organization ...?"

Mr. Campanella: "I am not sure, but I do not think they ... do these things purposely. ... I think it is more a matter of almost carelessness."

Mr. Green: "There are a lot of guys ... they like to go under bridges and a few other things. ... One particular guy who was flying a Bonanza ... flew at maximum continuous power ... exactly 1000 feet above terrain ... to impress his friends ... but his friends, fellow pilots, determined ... he was excessively dirty. And at 3:00 o'clock in the morning, with ice cold water ... they removed that dirt."

PANEL C: REGULATORY RESPONSIBILITIES FOR G.A. ACTIVITY

The panel presentations and wide ranging discussions shed considerable light on:

- Planning experiences in Federal, state, and local programs
- FAA, EPA, industry, and other views of the manner in which Part 36, aircraft certification noise limits, should be established and interpreted
- Concerns regarding subjective reactions of airport neighbors vs. noise exposure limits proposed for air carrier and G.A. airport environs.

Airport Noise/Land Use Planning to Achieve Compatibility

Dr. Bragdon requested reports on experience in planning programs at the Federal, state, and local levels regarding the value of assurances that land would be zoned and used for uses compatible with predicted aircraft noise levels. He asked, "... is there any continuity that the FAA monitors beyond the point of the actual ADAP award relative to effective land use planning in the future?"

Mr. Blair of the Atlanta Regional Office of the FAA responded that there is a "... very casual type of assurance and we gave it a very casual type of review and I will accept criticism that we probably never formed much of a follow-up. That has changed quite a bit, primarily I guess, because of the national Environmental Policy Act, and (also) because of the position we have taken in the Southern Region.

"We did discover that in many cases the responses gave us assurances that were not adequate. They did not identify the measures that they were going to take on a schedule and we had not established follow-up procedures.

"One of the problems with assurances ... are the words 'reasonable to the extent possible.' There is no clear definition of what reasonable effort is .... If they do not have zoning we require that they identify a schedule ... when they expect to adopt certain zoning ordinances.

"... in most cases, probably 90 percent or more, that process takes longer than the life of the individual grant. So ... we obtain realistic assurances from the sponsor and follow-up on subsequent grant agreements.

"I do not know that we have ever refused a grant to a major airport because of inadequate assurances. I anticipate that sometime in the future we may be forced to make such a decision ...."

Mr. Montgomery stated regarding the Maryland program that "local communities can zone land any way they want, however, they are going to have to use it in a manner which is compatible with the airport.

"... the county that BWI (Baltimore-Washington International Airport) is located in ... in general they are adopting zoning which is compatible with the limits for exposure.

"... other areas ... where there are significant business communities ... are reluctant to adopt more stringent requirements than the State requires."

At another point Mr. Blair stated that ... "Airports must develop (a) plan to minimize noise impact within limits of flight safety and economic and technical practicality. Any residual areas above 65 Ldn ... the counties are given 6 months to adopt regulations applicable to this noise zone. There is an out ... board of appeals can grant a variance but structures must be sound proofed to offset noise above 65 Ldn."

Mr. Miller described the experience in California. He said, "Ours has not been too successful. We have a strong tradition of local government in California ... the counties do have land use controls outside the incorporated areas ... in the incorporated areas the cities control it.

"All counties must have ... an airport land use commission ... to do planning .... Unfortunately ... there is ... no date when these ... plans had to be finished or adopted. So ... in a few counties we have airport land use commissions but in most ... we do not.

"The other thing that has made it fairly weak is ... local government can overrule the airport land use planning commission plans. ... the county ruling body ... the city council ... can overrule ....

"... in the final analysis ... political decisions have to be made ... to have a plan ... implemented. The technicians can do all the work they want, come up with a wonderful plan, but it has to be adopted politically."

Mr. Blair reviewed the DOT/FAA Aviation Noise Abatement Policy (November 18, 1976) document which lists actions which the airport proprietor can take to abate aircraft noise. The document states, "The proprietors obligations to refrain from imposing an undue burden on interstate or foreign commerce or discriminating unjustly, and to avoid potential conflicts with the FAA's control of airspace and air traffic are not difficult to articulate as matters of principle but very difficult to apply to a given factual situation."

Mr. Blair pointed out that ADAP funds are made available by the Federal Government for the development of master land use plans for high aircraft noise impact areas; land acquisition; and pilot programs at Fort Lauderdale, Orlando, Cincinnati, Atlanta, and Birmingham.

Problem Areas in Planning

Herman Bernard stated that land use planning will not work in College Park (a community off the end of the Atlanta Airport runways). He stated that College Park was there before the airport and that there should be some restriction on the expansion of airport noise into their community rather than concentration on moving the people away from the noise.

Mr. Green said, "... with respect to the airport situation; we need uniform regulations throughout the U.S." Then he said, "... where are you going to put 450,000 people (to move them away from) La Guardia (Airport)?"

Mr. Gosnell mentioned some poor local ordinances and their implemention. He noted that a suburb of Palm Beach has an ordinance that requires aircraft to be at 1,000 feet altitude just off the end of the runway. He also mentioned problems because a developer learns where an airport will be and gets a variance to build houses nearby which seem attractive ... later comes a major airport.

Mr. Gosnell also described a situation where Flying Tiger's Airline wanted to have an area around an airport zoned for noise before they moved into an airport. The county had problems because its zoning regulations had to apply to the whole county and businesses remote from the airport did not want an ordinance which would affect them.

Mr. Gammon mentioned the problem where several towns or counties are impacted by noise from an airport. He said that the Maryland state plans sound logical. He emphasized that the plan must be site specific, i.e. "... has to be tailored to the airport situation. ... different terrain, types of aircraft, different community locations from runways ...."

Control of Aircraft Operations at Airports

Mr. Gammon emphasized the need for work with pilots. He stated, "We hand out information sheets to pilots, every new jet (pilot) that arrives at our airport." We have signs on the airport. "There is a mutual respect that has to be obtained and this can only be done by communication."

Appropriate Noise Exposure Limits

Several people questioned the appropriateness of noise exposure limits established for busy areas around busy air carrier airports being applied to quiet areas around remotely located G.A. airports with low background noise levels.

Mr. Green stated, "There is a rule that EPA should be following ... and I do not see very much of it being done, and that gets into a lot of the basic understanding of psychoacoustics ... what levels we ought to be having. There has got to be some simple way that we can better understand the psychology of noise and the mechanics of noise .... This role should be filled by EPA as its major obligation under the Noise Control Act of 1972."

Mr. Green suggested that the EPA should not have "spent a lot of time and money ... (on) proposed rules to the FAA (as required by the law) but should have concentrated on psychoacoustics."

Aircraft Noise Certification Limits

There was considerable discussion about the setting of noise regulation limits (Part 36) between Lucie Searle, Community Liaison, Massachusetts Aeronautics Commission and Stanley Green of the General Aviation Manufacturers' Association.

Ms. Searle asked the question, "(Do) ... the standards reflect the barest minimum of what we are doing or should standards be a goal that we strive for? Now, I see them as a goal, something that we want to work to do better on. And I think perhaps others see them as reflecting the very barest minimum that we are capable of doing.

"In Great Britain (at) ... the Downey ... Roble plant ... they have ... an abductive propulsor ... a fan ... suitable for retrofit ... on a Norman Islander ... a twin engine prop ... and they claim a noise reduction of 20 decibels ... not sacrificing performance.

"To me that is part of this available technology that I am not sure we are taking advantage of.

"Someone questioned some of the EPA work, ... the EPA proposing and the FAA disposing ... the FAA turned down EPA's proposal for tighter standards for high props, not on the basis of technology but simply on the basis that EPA had not made an adequate health and welfare argument."

Mr. Green responsed to the "barest minimum of noise reduction vs. a goal that we should stress for" by saying "... if you have a law that (specifies noise limits on a weighted basis) and you are capable of building an airplane that will come in (lower than the limit) you are in fact obliged to do so." But then he mentioned that "... a geared propellor ... that comes in at low noise may be fine ... then I am faced with developing a different engine for another aircraft ... and I am economically unable to do so. ... The development of new engines is extremely expensive.

"We provided a tremendous amount of economic data based on studies ... on what it would cost to meet the requirements proposed by EPA ... (for) propellor driven aircraft. Those standards ... were wiped out ... because engines were not available."

Mr. Schettino pointed out that because the FAA can require that available technology be used "... that is why we have airplanes that are so much quieter than those (required) by the FAA regulation."

In further discussion Mr. Green mentioned letters from FAA to companies asking "have you met the best noise technology available? ... it was a qualified quote available unquote because (that) does not get into the economic reasonableness and technological practicalities."

Mr. Elkins responded to comments by Mr. Green that the "EPA ought to be developing ... psychoacoustic and acoustic knowledge" to meet national and local needs by saying: "They had established that Ldn 65 is where you can expect organized complaints about aviation noise. That has since been with highway noise also....

"There is a need, without question, to refine the data as to what occurs between Ldn 55 and Ldn 75 in terms of the public's perception of the noise environment.

"However, the noise (around airports) is so dominant right now ... I would be delighted if I could point a way to achieve Ldn 65 around commercial air carrier airports in this country. I cannot see a way within the next 20, 30 years ... possibly the next 150 years ....

"I would like to be able to say that the aviation community, which includes the Federal Government, State Government, manufacturers ... can at least hold out the promise to those people that are presently being exposed to levels of Ldn 75 or greater ... that they can look for relief through our actions because I think that is a terrible indictment upon our community to allow that to continue."

PANEL D: PRIVATE SECTOR ROLE IN GENERAL AVIATION ACTIVITY

This panel was composed of members of professions which have a major influence in the development of areas near airports but some of whom had little understanding of the consequences of their actions on the development of incompatibilities between airports and their neighbors. The discussion that followed the panelists' opening remarks highlighted the need for communication between those with aircraft noise expertise and those who deal in real estate transactions near airports. The discussion finally focused on the need for full disclosure of current or predicted aircraft noise impact in areas near airports, the availability of this information, and the desirability or manner of its presentation to prospective purchasers of affected real estate.

Dr. James D. Vernon, who had worked as a mortgage lender at a savings and loan association and as a real estate broker stated, "As a private sector operator, I see several problems involved in the airport area market. As a realtor, I am concerned that a customer who buys property from me might come back dissatisfied later and claim perhaps misrepresentation or concealment. I would like to furnish him with information so that he understands the situation he is getting into. As an appraiser, I have a hard time gathering data to understand what is happening in the market, what sales are occurring, and just exactly how the proximity of the airport and the noise impacts on the usability and the value of that land.

"... we did some checking in our university library to see what has been written and published in the area of airport noise and there is very little.

"As a mortgage lender I am concerned about lending in the airport proximity because of the risk of future land values and I think I would be inclined to be much more conservative. Whereas I might make a 75 or 85 percent lien on certain kinds of commercial facilities elsewhere in the city, in the airport region I might make it only 60 percent. So I am going to control myself in that way and, of course, there are obvious risks to the owners.

"... We have a modified caveat emptor system; profits and losses in land use and development are part of the equity of ownership of land ....

"I would like to undertake programs to deal with the problem of airport noise that really address imperfections in the market, such as lack of information, primarily, and try to make the operations allocate land to its highest and best use.

"I want to comment on two or three of Dr. Clifford Bragdon's suggested ways for dealing with the problem.

"One was tax incentive for the installation of sound attenuation insulation. It seems to me that as the market allocates land to its users and users to the sites, the prices on the property nearest the airport that are adversely impacted fail to reflect that. I think that informed buyers get somewhat of a bargain price on property they buy in order to offset the damage that they will suffer.

Preceding page blank

"I am talking about economic damage. I do not know how they address harm to health and happiness. I am talking about things we can quantify monetarily.

"A second suggestion was a fair disclosure requirement. This does appeal to me. I am eager to see the market work and that entails the providing of information to the participants in the market. I think that if left to their own devices, entrepreneurs can do a fairly good job of making the profitable land use work. What we need to do is to help safeguard the uninformed, the unsophisticated, the unsuspecting, the ignorant buyer. I think an information requirement would be appropriate for them.

"There is precedent for it. We have a requirement now that settlement costs be disclosed to buyers and they have to sign off, indicating they received this information. I do not think it would be difficult to move in that direction, to establish an airport noise zone and assure that either realtors or lenders inform the prospective buyers of this difficulty.

"Dr. Bragdon suggested that this would indicate local legislation. I think there is precedent for Federal legislation. As it is now, we have flood-plain zoning and any lender with a Federal connection has to assure that there is appropriate flood insurance if the property is located in that area. This is enforced at the Federal level. It is a requirement imposed on lenders who are chartered by the Federal Government to sell loans to the Federal Government, whose loans are insured by the Federal Government through the FDIC or Federal Savings and Loan Insurance Corporation. That takes in probably 96 percent of most home loans made today.

"I do not think as a lender I would like to put restrictions on private mortgage loans. I think that runs the risk of interfering with the entrepreneur's ability to recognize the highest and best use ....

"Lastly, I did not hear very much discussion of the use of LDIs (Land Development Incentives). Maybe this is too futuristic an idea. It appeals to me. I would think that perhaps tax increment bonds could be sold to raise money by a community to finance a land planning operation, land banking operation ...."

Mr. Lyndall Hughes, who is President of a local real estate aviation chapter of the National Association of Realtors, announced that he lives in a Cleveland bedroom community, Chagrin Falls, Ohio, and operates his twin engine Piper Aztec from a 2000 foot landing field which has a housing development 200 feet off the end of the runway. He stated, "... in ten years I have never heard one complaint from any of the residents that purchased houses in these areas."

Mr. Hughes explained, "Now I am in the real estate business, as you know. I am a developer, a syndicator. I have dabbled in the promotion of oil wells in my area and I have done a lot of things, but I was kind of disturbed to hear people come out and say developers are bad guys because I don't consider myself a bad guy. I think developers are good guys. We make things happen. As far as the planning is concerned, most of my experience with

planners has been that in many cases they have nice plans but they never contact the real estate people .... Try as I will -- many, many times I have tried to get on the local zoning board -- but that is almost an impossible task for a real estate man in the so-called suburban communities.

"... My group is a very specialized group of realtors. We right now are composed of about 250.

"... We have some members right now who are producing industrial parks with a landing strip attached. They are creating the whole thing. We have members who are producing residential developments with landing strips as part of the development and I, frankly, am at the very moment personally involved in an industrial development, a 100 acre industrial park.

"... Another thing that bothers me is the closing of small airports. Since I have been flying, which is since 1960, I have seen in my area alone five airports close, gobbled up by land development ...."

Mr. Terrence Love is a professor at the College of Architecture, at Georgia Tech. He stated, "In business school they teach you that nobody makes any money until somebody sells something and whether we like it or not we are all in the private sector because the private sector is basically where the selling happens. Our consulting firm has never really looked for consulting in the areas of airport noise. It is not an expertise that is sought or developed but it is certainly one you can back into in a hurry.

"As a consultant in real estate development in my area, irrespective of scale, there are six places where I have had some experience, sometimes limited and sometimes extensive. I will try to vignette something out of each of those: Real estate appraisal; highest and best use analysis of land; submission of applications for project approval; study of airport attractiveness, what tenants might an airport bring around it; then a role as an architect and a role as a real estate broker.

"We have been thrust into the study of land around airports as regards not the detriment but the attractiveness for sitting industrial parks, for office parks, other kinds of airport-related uses. This could be true in airport industrial and, in particular, air freight where the inventory may only stay in that location, warehouse, what have you for a few hours. If it was important that it be air-carried in the first place, then you do not leave it in a warehouse any longer than is absolutely necessary."

Mr. Julian Diaz is a member of the International Appraisal and Research Group, which has been involved with many noise-type problems with the Atlanta Airport for many, many years. He stated, "Most recently and probably most visually, we have been involved in the Mountain View Project where a noise impacted area has been, and funds have been allocated to buy up residences in what was considered a noise-impacted area. We had the responsibility of overseeing all the appraisal work and reviewing all the appraisal work in that project and it is still going on today.

"It is one of the pilot projects of that type in the country now, but my major concern about the noise issue and the airport noise issue is that I

do not feel the definition of the problem has really been crystallized. I mean, we all know that noise is the problem but I think to a higher extent that people's reaction to noise is the problem, how noise affects them, the problem from the medical point of view. We have got a lot of evidence but from a value point of view there is very, very little evidence on this.

"I think the effect that noise has on value is a major concern of people and it is evidenced by the weight of all the lawsuits that we have right now; the dockets are just filled with them and my major concern is that the decision-makers do not have the proper amount of data to make the intelligent policy decisions, to make intelligent regulations in the field of exactly what is the effect on values.

"For this reason, my major interest has been the development of various methodologies that can be employed by appraisers and employed by statisticians and others who are in the field. These are methodologies that can be applied to measure what this effect is. I think that it is absolutely essential that this sort of data is made available to policymakers so that we can be sure that the proper goals and proper standards are designed and are implemented and also so that local authorities, in trying to meet the regulations, can know what procedures will maximize their efforts in getting these goals and these regulations.

"The methodologies that basically we have come up with are pretty much a marriage of the input of the appraiser and the sophisticated statistical skills. Unfortunately, most of the studies I have looked at by appraisers in the past have shown a lack of use of these sophisticated statistical skills or, on the other hand, if they were done by statisticians, they were shown to have a certain amount of naivete about how the real estate market reacts and what factors are value-oriented. ... We were able to statistically determine that the no-effect zone on value -- in other words, where value was not depreciated as a result of the noise -- was the thirty to 65 Ldn or something like that."

At this point Dr. Bragdon asked for questions from the floor.

Mr. Robert Clark stated that in two towns around Cherry Point Marine Corps Air Base fair disclosure ordinances have been adopted. He stated that the disclosure comes at closing which is too late. He stated, "I have suggested to somebody down there that they start looking at the possibility of disclosing at an earlier time, perhaps at the contract or option stage of development.

"Moving on to another quick question I have for James Scott, I would like to mention that in the Kinston area we are still selling some property near an airport for five cents a square foot, not five dollars a square foot. Specifically, this comes to a severe problem. In fact, when it comes down to the real nitty-gritty of a zoning decision it is much easier for a zoning board to be persuaded or dissuaded from one classification to the next when there is a marketability for both types of uses. How do we inspire the nonresidential types of development in this area?"

Mr. Scott responded, "They will come in if it is attractive. They will come in if it is profit-making. The big problem -- and I had several

questions after I spoke about zoning -- is how do you attract people. How do you keep the residences out? How do you keep commercial and industrial in?

"On a small airport where the growth is not yet started, where there is not yet a lot of impetus behind it, you cannot do it or you are going to stifle the growth. I think you are better off with the zoning that is encompassing, one that allows all the classifications into it and tends to let it find its own level because you can destroy it if you are too restrictive."

Mr. Tyler described a situation where the wife of the secretary of an SAE committee wanted to buy a house east of New York City on Long Island. The committee, knowing she was interested in the area near Kennedy Airport, suggested she look at any property several times. She picked a property and looked at it several times but the real estate agent kept track of runway usage by calling the tower and was never available to show the property when the runway that put planes over the property was in use.

Mr. Tyler then asked the question, "How much interest do you suppose will be shown by the banking industry, for example, the real estate industry, the appraising industry in taking on the responsibility of making sure that the buyer is aware of what the problem will be so that it is not really false advertising or false presentations as is the case all over the country?"

Mr. Hughes answered, "I am sorry you are talking about an experience with a so-called 'realtor,' but the first thing I would like to point out is that 'realtor' is not a generic term; it is a specific group of real estate brokers and I hope the real estate broker who did this to your friend was not a realtor.

"Second, as far as disclosure is concerned let me say that the Securities and Exchange Commission is at the present breathing down the necks of all real estate brokers in the country. I believe that in the next four or five years all real estate brokers will be forced to have securities licenses. They have decided that in about 85 to 90 percent of the cases the sales by real estate brokers constitute an investment contract, and if in fact that is the case and I believe it is, under the terms of the Securities and Exchange Commission, someone who has not disclosed all the facts in a sale or a private single-family residence could go back on that salesman or the broker that that salesman worked for and demand his money back.

"I do not believe that the realtors in general will try in any way, shape or form to hide the disclosure of printed facts such as flight patterns. It may be going on now but it may be to a certain degree done because they do not have the facts in front of them. I am sure it is in the case where you are talking about because it is very common knowledge. But in many instances in other communities the buyer on the ground really cannot tell where the airplane is."

Mr. Schettino commented, "EPA has never said that Ldn 65 was acceptable in any circumstance. The document in which we expressed what national goals or national strategy should be indicated said we should do everything possible immediately to remove people or to improve the exposure for those people that were presently exposed to Ldn 75 or greater.

"The second statement in that document says that we should then proceed to take the steps and to do the things necessary to improve exposure to Ldn 65.

"The final statement that we make is that for any new activities and for long-range planning, Ldn 55 or lower should be the objective and that was to be accomplished by bringing all of the people that are affected by noise together to see that that was achieved.

"Now, when we talked specifically about aviation, I think that most of us have concluded that it is going to be a monumental task to even improve the situation for those people who are presently exposed to Ldn 75 and greater in the remaining years of this decade.

"The question that we have is whether we do things now to solve that problem. I would conclude that the range of noise levels that pertain around general aviation airports varies anywhere from Ldn 45 up to perhaps Ldn 65 or 70, and to my mind that is a monumental task to try to develop some national strategy -- and that is primarily what EPA attempts to do.

"Perhaps our role is to bring these people together more often in a nonhostile, nonadversarial situation which always pertains when the Federal Government gets directly involved in regulations.

"I think that, with only very rare exceptions, most of the aviation noise problem has resulted from encroachment. I am old enough to know and remember that you had to drive for at least an hour in order to show your son what a real airplane looked like and not that model that you carved out of balsa wood for him -- and I did that many times.

"I can go back to a number of those airports now as an older and wiser man and find not the pastures -- but residences and blocks and tracts of residences. So there was an encroachment. That encroachment came about because a developer built there and people bought those homes and that problem still continues.

"Pertaining to the real estate developers and/or banking interests, what obligations do they have to participate directly in a land use planning and zoning process to insure environmental protection? If they have any obligations, how are they discharged? Do national organizations get involved or just local interests?

"Finally, if the answer to my first question is no, but we here believe that they do have a role and should participate, what can we do to get them involved? I think that ought to be a closing note."

PANEL E: NON GENERAL AVIATION PLANNING EXPERIENCE

This final panel, while making more matter-of-fact presentations, provided insights into areas of considerable concern to veterans in their respective areas of expertise. The impact of deregulation on aircraft noise and the experiences of some airport operators in trying to hold the line on noise increases are presented. Advice is given on the need for compromise in negotiations between airport operators and the airport neighbors. Noise disclosure in airport environs was discussed again and in summing up comments the need for discriptors of the impact of noise on health as well as economics was emphasized.

There were several statements of appreciation for insights gleaned at this conference and a desire to have conferences of this type in the future.

Mr. Gordon A. Miller, Deputy Chief, California Department of Aeronautics described the progress being made in the California aircraft noise abatement/land use compatibility plans. (This is an expansion of the explanation of the California experience given in the summary of Panel C discussions.) He stated that the aircraft noise standards, "became effective in 1972 and initially 11 airports were designated as having a noise problem under the noise standards. The first step in instituting a noise program on an airport was for the county to designate the airport as a noise problem airport. The main emphasis in these standards was for local control of airport noise.

"Recognizing the difference in noise sensitivity between the communities, the Legislature and the committees that were set up to actually draft the legislation and help us draft regulations, emphasized this all the way through the standard that local people working with the standards that were set were to actually determine how the noise would be dealt with.

"The noise standards apply to all civil airports but they have been effective mostly on the airline airports. The noise standards themselves were set with the large jet airliners in mind and we found that on practically all of our general aviation airports the criteria and noise level of 65 CNEL remains within the airport's boundaries, so that under the standards we have no purely general aviation airport that has a noise problem.

"The CNEL standard that we use is very similar to Ldn and we have been very happy to see, particularly within the last few years, more and more movement toward using Ldn by nearly everyone. And I suppose that when we get around to making some changes in our noise standards, which I hope we will within the next couple of years, we are very likely to change over to the Ldn method.

"I think the people working on setting the standards -- and most of us were overly optimistic on what could be done in quieting the airplanes -- I think we all thought that by 1980 we would be much further down the road toward quieting the airport and coming closer to meeting the standards than we have been able to do.

"With that in mind, a variance procedure was set up in the standards so that for an airport that had non-compatible land use in a high noise zone would apply to the department and get a waiver under the standards to operate within the law for the next year. In order to issue the variance, however, we had to work with the airport and determine that they had a reasonable noise abatement program in effect so that at the end of that year the airport would be making some progress toward meeting standards.

"Well, we have had as many as five variances now, five annual variances on some of our airports and we are making some progress on them. The airports are all making progress but on some of them we are a long way from meeting the standards. It is also recognized that 65 CNEL was too low a level to start with so we have airports now that are required to only meet 75 CNEL. Those are airports where four-engine jets are operating. They have to meet 70 CNEL by the end of next year and all airports have to meet 65 CNEL by the end of 1985. That is the standard set.

"We have at least three or four airports where probably this will not be possible. We are going to have to find some way to deal with that, whether it might be something on the order of a SETAC by recognizing that some people would rather stay close to the airport and put up with more noise than others and maybe by insulation or by buying those people out who would like to move out, by buying up the land close in that is just too noisy for anyone to be there and maybe redevelop in compatible use. Some things like that will have to be done.

"We have an Airport Land Use Planning Law. It is not directly related to the noise standards themselves, but, of course, there is some relationship there in that that law requires an airport landings commission to be set up in each county that has an airport and that planning related to noise abatement be done around each airport and as I explained yesterday, that is not being done very well.

"There is no time specified when those plans have to be done. There is no fund provided for it in the legislation and there just has not been very much participation. It was a good idea and has raised a lot of discussion about planning around an airport. I think people in California know more about what can be done than they would have if we had not had the commissions formed, but it certainly has not done the job that we hoped it would."

Mr. Thomas A. Duffy, Director of NOISE, National Organization to Insure Sound-controlled Environment posed the question, "Why do all these encroachments take place? Why do local officials seem so uninformed, dumb, whatever, when you try to come to them with airport needs, ...

"Part of it rests on the fact that local politicians, like all other politicians, thrive on compromise. When they run into airport noise problems there does not seem to be any avenue of compromise for them. They have on the one hand neighbors who are screaming and yelling, 'We need help. We are being molested in our homes by this noise. Do something.' They go to the airport on the other hand and the minute they talk about fixing noise you get pilots talking about, 'You are trying to ruin safety and make us crash,' and all this sort of thing. That is all they get. They never get into the avenues of compromise that are normal to them in every other thing they do in the country.

"And perhaps one of the things we should learn from this and the talk about communication and education we have had for everybody else and heard about for a couple of days, is that they need to be shown some avenues of compromise.

"The Torrance experience I think is an excellent one in a sense because they went out and told the local officials and people about the things that could be done in their operations and were being done and when people understand that things are being done, they help.

"Some ways of compromise of land use -- of the Los Angeles airport experience, some of those cities, Inglewood, are finding out that you may have to move people but it does not have to be a dead financial loss. What you can do is redevelop an economically profitable way so there does not have to be a monstrous cost to the city, state, and Federal Government. The point here is that if you show them the avenues of compromise that they can follow in the ways that they do everything else, they will be more amenable to meeting airport needs or going at least halfway toward them.

"I was struck the other day when I heard about avigation easements; thought about these for a while. Avigation easements do not solve noise problems. Avigation easements solve the legal liability problem for an airport operator, which does not approach whether people get sick or are hurt physically or hurt psychologically or can live well because an airplane flies over their heads. Just because an airport is able to buy an easement and can thereafter fly with unlimited noise over an area forever -- the third subsequent owner of that house got nothing out of the easement payment and is suffering from the noise problem and has fewer ways of dealing with it than the original owner did. And when you go into 'solutions' like that, I think we are getting on the wrong track."

David Braslau, of David Braslau Associates stated, "I think the concept of the level of expectation appears to be very important for general aviation noise impacts. There seems to be a possible threshold level above which people will complain and below which there are not always complaints evident. A fellow in Sweden has been doing some work on this. That threshold is approximately a hundred operations a day.

"The Ldn is, I think, not sufficient to describe the noise environment of small airplanes. I think you need something like times above or duration above .... We have done a lot of studies in Minnesota where we have this L10, and where we have actually related L120, time above levels, to Ldn and Leq. We have found that the Ldn number is not good enough any more. It is actually a non-linear function. So, there is a complex relationship between Leq, Ldn and time above.

"And I think that when you get down to the airports with a small number of operations, the Ldn really fails and I think that is why people have mentioned this, that people complain even though the Ldn is below 55. Joan Caldwell, I think, mentioned this too."

Mr. James K. Thompson asked, "Does anybody have any feel for what percentage of the general aviation airports really have noise problems?"

Mr. Angelo Campanella answered, "... most of the airports that have noise problems did not have a noise problem at one time. I think the only answer is that all airports have a potential noise problem and, as one of the speakers said this morning, there ought to be on file in the courthouse or the county seat somewhere what the noise contour is of that airport, and it need not be a precise contour. It may not need to be one that is adjusted to the traffic every year but some person who goes there to buy a house or put a house in a residential area needs to have his petition, his plat, compared with the contour and a yes/no position could be developed relatively early in that planning exercise.

"That is the problem. I will say it once more. All airports have a potential noise problem, period."

Ms. Searle asked, "Do you feel at Minneapolis that the increased traffic, promoted primarly by regulatory reform, is a concern to you noisewise and is it something that would lead you to want to discourage CAB approval, let's say of multiple route awards for CAB approval, of routes that would lead to additional traffic?"

Mr. Hamiel responded, "Yes, I do. There is just no way to get around it if you are going to increase your airline or air carrier activity by 20 percent and therefore approximately 20 percent of your total utilization of runways. Over a populated city like Minneapolis, you have got a problem. We did not recognize the problem existed for probably the first four or five months of the year because of the relatively elaborate runway rehabilitation program that was going on and the reshouldering. We attributed the increased complaints -- people calling up and saying, 'There are more airplanes; why?' We said that it was because one of the two parallel runways was closed and there was more traffic on the other parallel runway. But after looking at the consolidated schedule, we are taking a closer look now."

Mr. Miller stated, "Their (the CAB) contention is that you cannot discriminate against an airline that wants to come in. You have to find some way to let him have equal access to the airport that the incumbents have. So in effect what you are saying, you are going to have to take something away from the guys there in order to give part of it at least to someone who wants to come in ....

"A curfew is one thing to help keep out the night flights but our major airports are running into problems there too. San Diego again, they imposed a nighttime curfew on themselves. In our last waiver or variance under our noise standards we asked them to extend that one hour on each end. They declined to do that, took us to court, and the Federal court judge said that the State could not impose that kind of a restriction. The airport operator himself could. He could extend the curfew as long as he did not interfere unduly with interstate commerce but we, as a State, could not tell him to do that."

Mr. James Hahne commented, "Other than the word 'promulgation' and the phrase 'technically feasible and economically reasonable' there were two other words that come up consistently out of some 38 speakers and panelists. Thirty of them mentioned communications and education and of all the people that I talked to individually -- my first question or second question was: Out of this conference, what was the one thing that you think is needed for the next conference?

"And those two words always came up, communication and education. This is where we obviously need some more work and I would hope that the conference would keep that in mind ...."

Dr. Bragdon responded, "I will summarize this by saying that I think first of all the appreciation of the support we have received is mutually shared by a lot of people.

"The most difficult thing I have ever found is to recognize the fact that I may not know something, ... I would say my level of knowledge has gone up to a very significant level and I hope everybody can say that to some extent.

"The second is that we have established some communication and that communication, interesting enough, has been reflected in a variety of different ways. One is that a lot of jargon which we could have thrown around has been generally kept to a lower level.

"The third point is that I think a dialogue has been established. Various people have said we need to get together in different ways. The sharing of information I think is a key to what we have done in this meeting. If nothing else, we have had the opportunity to share experiences, but also to start sharing physical information. Without that physical information we are not going to get any further down the road than we are. That means the real estate interests, the planning interest, the engineers' interests, the regulators' interests, everybody's interest -- and I hope we can establish that process. In terms of findings, just to highlight a couple of things I think are sort of important; one is we have looked at the issue of technology and, unlike the commercial aircraft, G.A. technology, interestingly enough in several areas is coming in below what the standard is rather than to meet the standard. So I think that is one thing that is certainly constructive in terms of the manufacturing side.

"The concern of descriptors of impact from the health as well as economic standpoint, the real estate interests have determined to a great extent that the economy essentially determines or the market essentially assesses the impact and reflects that impact in terms of price. The concern there, of course, is if you do not integrate health effects into the economy then the real estate industry has no way of discounting that factor -- and I think that is one thing we all must look at -- the quantitative basis of the health impact in terms translatable to the real estate industry as a factor in terms of what quote is a market.

"Those are some of the observations that I have had. I guess the last one in terms of this process is the politican and we feel I think as a collective group that greater communication is necessary and the role of the

politican being a person representing a compromise situation is something we must deal with. Give them the tools to help them make decisions but not to the point that the politician works his way out or her way out of the decision, but to assist them in making a rational decision -- which gets down to the question of accountability. And all of us are involved or should be involved in the accountability process. I think that is really where we have to play a role in the future.

"In the future I think this conference procedure is how we develop some informational base for communication. I hope that EPA would pick up on this, and not only EPA but also work with the FAA to insure that there is communication at the Federal level, but then get the private sector folks involved.

"I think what we need to do, hopefully, is to establish a team, collective team that will work toward resolution of this and hopefully a conference of this type would be continued in future forms with a certain schedule of activities."

Mr. Elkins said, "Well, let us just say we, obviously, do appreciate all of your participation. I think the conference from our point of view has far exceeded our expectations.

"If you have any suggestions about how the conference could have gone better, please send them in while they are fresh in your memory, so that we can find a way to sponsor similar conferences ourselves next year or can find other sponsors to go with us. I think one group that I would seek very hard to try to go with us, if we were able to participate again, would be the FAA. But I think equally so, the private sector, if you have suggestions on what we might do to continue the communication during the year and in years to come, we welcome those as well."